Title: REDUCTION OF ANTIOXIDANT ENZYME LEVELS IN TUMOR CELLS USING ANTISENSE OLIGONUCLEOTIDES

IN THE CLAIMS

Please amend the claims as follows:

- (Cancelled) 1.
- (Currently amended) The oligonucleotide antisense nucleic acid of claim 6 or 7, wherein 2.. the antisense nucleic acid which is about 20 nucleotides in length.
- (Currently amended) The oligonucleotide antisense nucleic acid of claim 6 or 7, wherein 3. the antisense nucleic acid sequence which is phosphorothiolated.
- (Cancelled) 4.
- (Withdrawn) The oligonucleotide of claim 6 or 7, wherein the antioxidant enzyme is 5 catalase or phospholipid glutathione peroxidase.
- (Currently amended) An oligonucleotide comprising an antisense nucleic acid sequence 6. that is about 18 to 26 nucleotides in length, wherein the entire antisense nucleic acid is at least 90% complementary to and binds specifically to a contiguous portion of a nucleic acid that encodes a human manganese superoxide dismutase; and wherein the contiguous portion includes the start codon of the nucleic acid encoding the manganese superoxide dismutase.
- (Currently amended) An oligonucleotide comprising an antisense nucleic acid sequence 7. that is about 18 to 26 nucleotides in length, wherein the entire antisense nucleic acid is 100% complementary to and binds specifically to a contiguous portion of a nucleic acid that encodes a human manganese superoxide dismutase; and wherein the contiguous portion includes the start codon of the nucleic acid encoding the manganese superoxide dismutase.
- (Currently amended) A method of treating a tumor in a mammal comprising reducing 8. antioxidant enzyme levels in a cell of a tumor by administering to a mammal having the tumor a

therapeutically effective amount of an antisense nucleic acid sequence that is about 18 to 26 nucleotides in length, wherein the entire antisense nucleic acid is at least 90% complementary to and binds specifically to a contiguous portion of a nucleic acid that encodes a human manganese superoxide dismutase, and wherein the contiguous portion includes the start codon of the nucleic acid encoding the human manganese superoxide dismutase, and wherein the antisense nucleic acid is administered by injection into the tumor.

- 9-11. (Cancelled)
- (Original) The method of claim 8, wherein the mammal is a human. 12.
- 13. (Currently amended) The method of claim 8, wherein the therapeutic agent antisense nucleic acid further comprises a delivery vehicle.
- (Original) The method of claim 13, wherein the delivery vehicle is lipofectamine or -[1-14 (2.3-dioleovloxy)propyll-N.N.N-trimethylammonium methyl sulfate ("DOTAP").
- 15. (Currently amended) The method of claim 8, wherein the antisense nucleic acid sequence is phosphorothiolated.
- 16-17. (Cancelled)
- 18. (Currently amended) The method of claim 8, wherein the entire antisense nucleic acid sequence is 90% complementary to the contiguous portion of the nucleic acid that encodes a human manganese superoxide dismutase.
- 19 (Currently amended) The method of claim 8, wherein the entire antisense nucleic acid sequence is 100% complementary to the contiguous portion of the nucleic acid that encodes a human manganese superoxide dismutase.

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(Currently amended) An oligonucleotide comprising an antisense nucleic acid sequence
that specifically binds to a nucleic acid encoding an antioxidant enzyme start codon, wherein the
sequence is SEO ID NO:2.

(Currently amended) The oligonucleotide antisense nucleic acid of claim 20, wherein the
antisense nucleic acid sequence which is phosphorothiolated.

22. (Cancelled)

- 23. (Withdrawn) The oligonucleotide of claim 6 or 7, wherein the antioxidant enzyme is copper and zinc superoxide dismutase.
- 24. (Withdrawn) The oligonucleotide of claim 6 or 7, wherein the antioxidant enzyme is catalase.
- 25. (Withdrawn) The oligonucleotide of claim 6 or 7, wherein the antioxidant enzyme is phospholipid glutathione peroxidase.
- (Withdrawn) The oligonucleotide of claim 6 or 7, wherein the antioxidant enzyme is cytosolic glutathione peroxidase.
- 27. (Previously Presented) The method of claim 8, wherein the tumor is breast cancer.
- 28. (Withdrawn) The method of claim 8, wherein the tumor is glioma.
- 29. (Withdrawn) The method of claim 8, whercin the tumor is melanoma.
- (Currently amended) The oligonucleotide antisense nucleic acid of claim 6, which is 18 to 26 nucleotides in length and is at least 90 % identical to SEQ ID NO: 2.

31. (Currently amended) The eligonucleotide antisense nucleic acid of claim 6, the sequence of-which consists of SEQ ID NO: 2.